



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/349,423 07/07/99 MURAKAMI

H 31050.7US01

MANATT PHELPS & PHILLIPS, LLP
11355 WEST OLYMPIC BLVD.
LOS ANGELES CA 90064

TM02/0328

EXAMINER

MORGAN, R

ART UNIT

PAPER NUMBER

2166

DATE MAILED:

03/28/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.	Applicant(s)	
09/349,423	MURAKAMI ET AL.	
Examiner	Art Unit	
Robert W. Morgan	2166	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claims ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6 and 7.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other: _____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: page 5, line 16 “throught” should read “through”.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-7, 9-24, and 26-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No 5,812,070 to Tagami et al.

--In considering claim 1, Tagami et al. teaches a method for determining an order of allocating electric vehicle for use depending on different charge levels of the vehicles comprising the steps of: a user having the entered an expected distance of an intended trip and selecting a group of vehicles having charge levels which are adequate for covering said expected distance of an intended trip(see: column 8, lines 27-34).

Tagami et al. fails to explicitly teach allocating a vehicle having a second highest level of charge in the selected group if there are two or more vehicle in said group.

It is common knowledge to allocate a vehicle having a second highest level of charge, since Tagami et al. teaches the concept of giving a vehicle with minimum amount of charge to

meet the user need, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Tagami et al. to select a vehicle having the second highest charge since the vehicle with second highest charge still meets the inventive concept of Tagami et al. for selecting a vehicle with a minimum amount of charge, because it would leave the vehicle with the most charge still available which therefore increases the operating efficiency and minimizing the cost of motor vehicles for allocation of electric vehicles(see: column 8, lines 27-34).

--In considering claim 2, Tagami et al. teaches a method for allocating one or more vehicle from a fleet of electric powered vehicle to one or more users, wherein each vehicle has a state of charge (SOC) at any given time, the method comprising: receiving a travel request from a user and selecting a group of one or more vehicles from the fleet, where each selected vehicle has SOC sufficient to meet the travel request from the user(see: column 8, lines 27-34).

Tagami et al fails to teach the group includes more than one vehicle, then allocating the vehicle having the second highest SOC in the group for the user, and if the group includes only one vehicle, then allocating said one vehicle to the user.

It is common knowledge to allocate a vehicle having a second highest level of charge, since Tagami et al. teaches the concept of giving a vehicle with minimum amount of charge to meet the user need, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Tagami et al. to select a vehicle having the second highest charge since the vehicle with second highest charge still meets the inventive concept of Tagami et al. for selecting a vehicle with a minimum amount of charge, because it would leave the vehicle with the most charge still available which therefore increases the operating efficiency

and minimizing the cost of motor vehicles for allocation of electric vehicles(see: column 8, lines 27-34).

Claim 3 recites subject matter that was met in claim 2 above, as well as the claimed step of receiving a travel request comprises receiving information associated with an expected distance of travel and wherein said step of selecting a group comprises selecting one or more vehicles, each with a sufficient SOC to travel the expected distance(see column 5, lines 21-23, 62-67, column 6, lines 1-2).

Claim 4 recites subject matter that was met in claim 2 above, as well as the claimed step of receiving information associated with an expected time period of use and wherein said step of selecting a group comprises selecting one or more vehicles, each with a sufficient SOC to travel for expected time period is met by the user's past usage records which include the time and distance information on the used vehicle(see column 5, lines 21-23, 62-67, column 6, lines 1-2).

Claim 5 recites subject matter that was met in claim 2 above, as well as the claimed step of receiving a travel request comprises receiving information associated with an expected destination port and a expected distance of travel beyond a direct route to the destination port and wherein said step of selecting a group comprises selecting one or more vehicle, each with a sufficient SOC to travel the combined distance of the direct route to the destination port and expected distance of travel beyond the direct route system is met by the user's past usage records which indicate shortest and longest travel routes to expected destination when selecting the appropriate vehicle to perform the trip(see: column 8, lines 27-34).

Claim 6 recites subject matter that was met in claim 2 above, as well as the claimed step of identifying the allocated vehicle to the user is met by the renting procedure in which the user's is given an IC card which identifies the appropriate allocated vehicle(see: column 5, lines 27-34).

Claim 7 recites subject matter that was met as discussed in claim 6 above, as well as the claimed step of identifying the allocated vehicle to the user comprises displaying identification information to the user on a display device is met by the user's IC card used for identification of the appropriate vehicle and the user interface (48) which has a display screen and keyboard(see: column 5, lines 41-45).

4. Claims 8 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,812,070 to Tagami et al. in view of U.S Patent No. 5,726,885 to Klein et al.

--In considering claims 8 and 25, Tagami et al. fails to teach displaying a map to the user and receiving user-selected map location corresponding to locations on the display map through a user-interface associated with the displayed map.

Klein et al. teaches a vehicle map display for the user to assist location and current position of the vehicle.

Although Tagami fails to teach a map to the user and receiving the user-selected map location corresponding to location on the display map through a user-interface associated with the display map, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to incorporate a map system as shown by Klein et al. in the vehicle system of Tagami et al. for the purpose of assisting the user's desired travel requirements(see: column 7, lines 17-22).

--In considering claim 9, Tagami et al. teaches a method for allocating one or more vehicle from a fleet of electric powered vehicle to one or more users, wherein each vehicle had a state of charge(SOC) at any given time, the method comprising: providing a user-interface terminal at one or more ports is met by the user interface(48) at the main port (MP)(see: column 5, lines 34-36); receiving travel request information from a user at a user-interface terminal a communicating the travel request information to a computer is met by the user interface(48) communicating the travel information to computer (60)(see: column 5, lines 46-48); and operating the computer to select a group of one or more vehicles from the fleet, where each selected vehicle has an SOC sufficient to meet the travel request information from the user is met by the computer (60) selecting for the user a motor vehicle (C) with the sufficient charge to complete the desired trip(see: column 5, lines 60-67, column 6, lines 1-2);

Tagami et al. fails to teach if the group includes more than one vehicle, then operating the computer to allocate the vehicle having the second highest SOC in the group for the user, and if the group includes only one vehicle, then allocating said one vehicle to the user.

It is common knowledge to allocate the vehicle having the second highest SOC in the group since Tagami et al. teaches the concept of giving a vehicle with minimum amount of charge to meet the user need, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Tagami et al. to select a vehicle having the second highest charge since the vehicle with second highest charge still meets the inventive concept of Tagami for selecting a vehicle with a minimum amount of charge, which would obviously leave the vehicle with the most charge still available which therefore increases the

operating efficiency and minimizing the cost of motor vehicles for shared vehicle rental system(see: column 8, lines 27-34).

Claim 10 recites subject matter that was met in claim 9 above, as well as the claimed step of receiving information associated with an expected distance of travel and wherein said step of operating the computer to select a group comprises selecting one or more vehicles, each with a sufficient SOC to travel the expected distance is met by the user's past usage record including the travel distance use to assist in selecting the vehicle with the appropriate amount of charge(see: column 5, lines 60-67, column 6, lines 1-2).

Claim 11 recites subject matter that was met in claim 9 above, as well as the claimed step of receiving travel request information comprises receiving information associated with an expected time period of use and wherein said step of operating the computer to select a group comprises selecting one or more vehicles, each with a sufficient SOC to travel the expected distance is met by the user's past usage record including the travel distance and time periods in which the selected vehicle are used(see: column 5, lines 6-11).

Claim 12 recites subject matter that was met in claim 9 above, as well as the claimed step of receiving travel request information comprises receiving information associated with an expected distance of travel beyond a direct route to destination port and wherein said step of operating the computer to select a group comprises selecting one or more vehicles, each with a sufficient SOC to travel the combined distance of the direct route to the destination port and expected distance of travel beyond the direct route is met by the user's past usage record used to determine which vehicle is sufficiently charge to complete the shortest or longest route to and from desired destination(see: column 5, lines 60-67, column 6, lines 8-12).

Claim 13 recites subject matter that was met in claim 9 above, as well as the claimed step of displaying vehicle identification information on a display device at the port facility from which travel information is received, identifying the vehicle allocated to the user is met by the user interface (48) which includes a display screen, keyboard, and IC slot that receives the IC cards which contain user's information determining which vehicle has sufficient charge to accommodate the desired trip(see: column 5, lines 60-63, and figure 4).

Claim 14 recites subject matter that was met in claim 9 above, as well as the claimed step of providing a user-interface terminal at one or more port comprises providing a user-interface at a plurality of ports disposed at geographically remote location relative to each other is met by user interface(48) with a keyboard and display screen at the main port(MP) in different geographical regions (G)(see: column 4, lines 65-67, column 5, lines 40-45); each port that have a vehicle search group(VSG) in which more than one and less than all of the vehicle from the fleet may be located at any given time and step of operating the computer to select a group of one or more vehicles from the fleet comprises selecting a group from the VSG of the port from which travel information is received is met by the storage area (41) at the main port (MP) that holds vehicles in which the user information has selected to complete the desired trip(see: column 5, lines 60-67).

Claim 15 recites subject matter that was met in claim 14 above, as well as the claimed VSG of any given port includes vehicles parked at a parking facility at the port is met by the vehicles parked in the storage area (41) at the main port (MP)(see: column 5, lines 27-31, 41-47).

Claim 16 recites subject matter that was met and discussed in claim 15 above, as well as the claimed VSG of any given port further includes vehicle due to arrive at the port within a

present time period is met by the returning procedure which include all vehicle returning to main port (MP) within a certain time period(see: column 5, lines 31-33).

Claim 17 recites subject matter that was met and discussed in claim 16 above, as well as the claimed VSG of any given port further includes vehicle due to become sufficiently charged at the port within a present time period is met by the charge area (43) which includes all vehicles charging at the main port (MP)(see: column 5, lines 26-28).

Claim 18 recites subject matter that was met and discussed in claim 15 above, as well as the claimed VSG of any given port further includes vehicle due to become sufficiently charged at the port within a present time period is met by charge area (43) which includes all vehicles charging at the main port (MP)(see: column 5, lines 26-28)

--In considering claim 19, Tagami et al. teaches a vehicle allocation system for allocating one or more vehicles form a fleet or electric powered vehicles to one or more users, wherein each vehicle has a state of charge(SOC) at any given time, the vehicle allocation system comprising: one or more ports at geographically remote location relative to each other, each port having a user-interface terminal for receiving a travel request from a is met by the user's interface (48) at the main port (MP) for receiving IC cards with user's travel information(see: column 5, lines 40-49); a computer system coupled in communication with at least one user-interface terminal and programmed to respond to a travel request received from a user, for selecting a group of one or more vehicles from the fleet, where each selected vehicle has a SOC sufficient to meet the travel request from the user, said computer system being further programmed to allocated the vehicle having the highest SOC in the group for the user, if the group includes more than one vehicle and to allocated the vehicle in the group, if the group includes only one vehicle is met by the

computer (60) communication with user's interface (48) to select the appropriately charged vehicle to complete the desired trip(see: column 5, lines 62-67, column 6, lines 1-2).

Claim 20 recites subject matter that was met in claim 19 above, as well as the claimed computer system comprises station computer system coupled in communication with a plurality of user-interface terminals at a plurality of said ports is met by the user's interface (48) communicating with the computer (60) at the main port (MP)(see: column 5, lines 40-53).

Claim 21 recites subject matter that was met in claim 19 above, as well as the claimed travel request comprises information associated with an expected distance of travel and wherein said group comprises one or more vehicles, each with a sufficient SOC to travel the expected distance is met by the user's IC card which holds the travel information that allows the user to select the vehicle with sufficient charge to complete the desired trip(see: column 5, lines 62-67).

Claim 22 recites subject matter that was met and discussed in claim 19 above, as well as the claimed associated with an expected time period of use and wherein said group comprises one or more vehicle, each with a sufficient SOC to travel for the expected time period is met by the past usage record of the user stored on IC cards which hold the travel information and time period in which the vehicle are to be used(see: column 5, lines 62-67, column 6, lines 1-2).

Claim 23 recites subject matter that was met and discussed in claim 19 above, as well as the claimed travel request comprises information associated wit an expected destination port and an expected distance of travel beyond a direct route to the destination port and wherein said group comprises one or more vehicles, each with a sufficient SOC to travel the combined distance of the direct trout to the destination port and expected distance of travel beyond the direct route is met by the past usage record of the user stored on IC cards which hold travel

Art Unit: 2166

information used in assisting the selection a vehicle sufficiently charged to complete the shortest or longest route to the desired destination(see: column 5, lines 62-67, column 6, lines 1-2).

Claim 24 recites subject matter that was met and discussed in claim 19 above, as well as the claimed port is provided with a display device for displaying identification information, identifying an allocated vehicle to a user is met by the user's IC card used for assistance and identification of the appropriate vehicle, and the user interface (48) which has a display screen and keyboard at the main port (MP)(see: column 5, lines 57-67).

Claim 26 recites subject matter that was met in claim 20 above, as well as the claimed each port having a vehicle search group(VSG) in which more than one and less than all of the vehicle from the fleet may be located at any given time is met by the collection and return points which have one or all vehicles (see: column 4, lines 6-10); computer is programmed to select a group of one or more vehicles by selecting a group from the VSG of the port from which travel information is received is met by the storage area (41) at the main port (MP) that holds vehicles in which the user information has selected to complete the desired trip(see: column 5, lines 27-31, 41-47).

Claim 27 recites subject matter that was met in claim 26 above, as well as the claimed each port includes a vehicle parking facility at which one or more vehicles may be parked at any given time and the VSG of a given port includes vehicles parked at a parking facility at the port met is by the storage area (41) at the main port (MP) which contain fully and partially charged vehicles(column 5, lines 37-47).

Claim 28 recites subject matter that was met in claim 27 above, as well as the claimed each port includes at least one vehicle charging facility and the VSG of a given port further

includes vehicles due to become sufficiently charge at the port within a preset time period is met by the disposition center addressing the situation of all the vehicles with regards to charging capability and rate of charge at the respective collection and return points is met by the charge area (43) which includes all vehicles charging at the main port (MP)(see: column 5, lines 26-28).

Claim 29 recites subject matter that was met in claim 27 above, as well as the claimed VSG of a given port further includes vehicle due to arrive at the port within a preset time period is met by the returning procedure which include all vehicle returning to main port (MP) within a certain time period(see: column 5, lines 31-33).

Claim 30 recites subject matter that was met in claim 29 above, as well as the claimed each port includes at least one vehicle charging facility and the VSG of a given port further includes vehicles due to become sufficiently charged at the port within a preset time period is met by the disposition center addressing the situation of all the vehicles with regards to charging capability and rate of charge at the respective collection and return points is met by the charge area (43) which includes all vehicles charging at the main port (MP)(see: column 5, lines 26-28).

Claim 31 recites subject matter that was met in claim 19 above, as well as the claimed plurality of vehicle subsystems associated on a one-to-one basis with vehicles from the fleet, each vehicle subsystem including means for detecting the SOC of its associated vehicle and for transmitting information corresponding to the detected SOC to the computer system is met by the return area (50) receiving vehicles containing drive recorders (24) and communicating the travel information on the drive recorders to computer (60)(see: column 6, lines 57-62).

Claim 32 recites subject matter that was met in claim 19 above, as well as the claimed request includes user identification information and wherein said computer system is

programmed to further base the vehicle selection on the user identification information is met by the user IC card containing travel information and communicating that information to computer (60) to assist in selecting the appropriate vehicle for the desired trip(see: column 5, lines 46-55).

Claim 33 recites subject matter that was met in claim 32 above, as well as the claimed computer system includes a storage of vehicle preference information associated with each user identification and is programmed to retrieve from storage vehicle preference information associated with user identification information received from a port terminal and to further base the vehicle selection on the vehicle preference information is met by the user's past usage record stored on IC card used to assist computer (60) in selecting a vehicle with sufficient charge to complete the desired trip(see: column 5, lines 46-55)

Claim 34 recites subject matter that was met in claim 33 above, as well as the claimed vehicle preference information comprises information from the group consisting of: number of vehicle wheels, number of vehicle doors, preferred minimal SOC or range of SOC's, distance usually traveled, and usual duration of vehicle is met by computer (60) confirming the vehicles condition(wheels, doors, etc.), travel details(distance and time), and the electric energy consumed by the battery(see: column 6, lines 57-60).

--In considering claim 35, Tagami et al. teaches a method for allocating one or more vehicles from a fleet of electric powered vehicles to one or more users, wherein each vehicle has a state charge (SOC) at any given time, the method comprising: receiving a travel request from a user and selecting a first group of one or more vehicles from the fleet, where each selected vehicle has a SOC sufficient to meet the travel request from the user(see: column 8, lines 27-34).

Tagami et al. fails to teach selecting a second group of N vehicles having the N highest SOC's of the vehicles within there first group, wherein N is a predetermined positive integer greater than 1 and allocating to the user the vehicle having the highest SOC of vehicles in the first group but not the second group.

It is common knowledge to allocate a vehicle having a N highest level of charge, since Tagami et al. teaches the concept of giving a vehicle with minimum amount of charge to meet the user need, it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Tagami et al. to select a vehicle having the N highest charge since the vehicle with N highest charge still meets the inventive concept of Tagami et al. for selecting a vehicle with a minimum amount of charge, because it would leave the vehicle with the most charge still available which therefore increases the operating efficiency and minimizing the cost of motor vehicles for allocation of electric vehicles(see: column 8, lines 27-34).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

In related art Hoffman Jr. et al. (5,869,950) describes a method for equalizing the amount of voltage of a battery for an electric vehicle.

In related art Kokubo et al. (6,157,315) describes a two-wheeled electric vehicle rental system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert W. Morgan whose telephone number is 703-605-4441.

The examiner can normally be reached on 8:30 a.m. - 5:00 p.m. Mon - Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq R Hafiz can be reached on 703-305-9643. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-1396 for regular communications and 703-308-1396 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Robert Morgan

Robert Morgan

March 23, 2001


TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

~~TARIQ R. HAFIZ
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100~~